ILLINOIS BUSINESS REVIEW

A MONTHLY SUMMARY OF BUSINESS CONDITIONS FOR ILLINOIS

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HIGHLIGHTS OF BUSINESS IN SEPTEMBER

The 1950 boom continued to gain momentum as it neared World War II levels. Industrial production reached 212 on the Federal Reserve Board index, up from 174 in September, 1949, and the highest since June, 1945. Producers of steel, copper, zinc, aluminum, and a host of other industrial materials were operating at or near full capacity. Manufacturing output continued at high levels, paced by the textile, automotive, and television industries. A record 702,000 television sets were produced in August, and more than four million sets were made during the first eight months of 1950, thus already topping 1949 production.

The boom reached these proportions without benefit of much actual defense spending. Orders have not yet been heavy, and those contracts which have been let have not yet resulted in employment and goods. Much of the planning of 1950 will not be reflected in production until 1951 or 1952. When the belated effects of defense spending are felt, powerful new impetus will be given the boom. Private outlays for machines and equipment should also increase, as plants now building are set in operation.

Construction Still Mounting

Construction put in place during September totaled $2.8 billion, one percent above the August high and 26 percent above September, 1949. Actual industrial construction, although increasing, was dwarfed by planned plant expansion in steel, railroads, chemicals, textiles, automotives, pipelines, and electric utilities. Residential construction continued at high levels, although the rate of increase slowed somewhat in September, perhaps from shortages and credit curbs.

Some materials shortages became evident, especially in metals and industrial raw materials and building supplies, and some vestiges of the gray market reappeared. As controls began to divert materials into the defense program, these shortages became more prevalent.

Manpower Shortages Looming

Employment in September reached 61.2 million, a peacetime record for the month and up about 2 million over September, 1949. Unemployment dropped 159,000 from August, now totaling about 2.3 million, or approximately half the early 1950 figure.

Unemployment resulting from materials shortages began to appear in a few industries and cities, but the shortage of manpower was a more general problem. Although this labor shortage was still localized and largely confined to the skilled trades, general shortages were appearing in a few large cities only recently plagued by unemployment. Meanwhile, wage increases continued and the work week lengthened.

Prices Steadier Near Highs

Prices continued at high and rising levels, but most prices had steadied from their dizzying summer rises. Wholesale prices, led by textiles, rose 1.3 percent to 169.4, virtually equal to the August, 1948, peak. Prices received by farmers followed suit, and the parity ratio rose from 103 in mid-August to 105 in mid-September. Inflationary elements, including unprecedented demand, a record volume of credit, developing material and manpower shortages, and recurring cost increases, were at work. Some price declines have occurred, notably in lumber, wool, sugar, and rubber, but these have often been merely adjustments from the sharp increases of midsummer.

Government price curbs have thus far been largely confined to restricting credit on new houses and consumers' durable goods. Initial regulations proved inadequate and have already had to be tightened.

Trade and Dollar Position Changing

The position of the United States in the world economy has been changing. Our chronic postwar export surplus narrowed in 1950, August imports exceeding exports for the first month since 1937. Soaring imports, coupled with United States foreign aid, private investment, and tourist outlays, have greatly improved the balance of payment position of most foreign nations. Second-quarter estimates indicate that foreign countries increased their gold and dollar reserves by $640 million, plus another $150-$200 million in gold production added to reserves. Since devaluation in September, 1949, they have increased their gold and dollar holdings by $1,550 million, compensating for the depletions of 1948 and 1949.

As a by-product of improved payment positions, many currencies are now rising relative to the dollar. The British pound has made marked gains, and the entire sterling area has registered advances. A striking demonstration of the new strength of foreign currencies was provided when Canada removed controls at the end of the month. Its dollar rapidly moved toward parity with ours.

STATE-LOCAL FINANCE · · **By Rolf Alfred Weil** · · **Page 8**

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Size of the Military Program

With reports of the approaching end of hostilities in Korea, rumors have been widely circulated that there will be a coordinate letdown in rearmament efforts. The Administration has flatly denied this possibility, and vigorously affirmed its intention of pushing preparedness. These developments spotlight the question of how large our mobilization program should be.

The conflicting views may be briefly summarized: On the one side, it is pointed out that after every war public sentiment has demanded a relaxation of controls and a reduction in military spending and the armed forces, and that even present programs cannot be carried through without the stimulus of battlefield reports. On the other, the Korean "police action" is regarded, not as a war, but merely as a preliminary incident in a larger conflict, which will require large program expansions to protect our international position.

Cost of a Three Million Man Force

President Truman has announced a goal of three million for the strength of the armed forces. It should be clear that this figure has no significance beyond that of a temporary basis for mobilization planning. Forces of 3 million are nowhere near sufficient for a major war effort; they may be more than necessary for sporadic "police actions"; and judgments of their adequacy as mobilized reserves vary greatly with views of the imminence of a third world war. Obviously, it is a goal subject to change without notice.

For purposes of mobilization planning and economic analysis, however, 3 million may be as good as any moderately higher figure. Even that number is being approached slowly; and production of military goods is still further behind the rates of output that mobilization planning regards as consistent with a force of this size.

Assuming, then, that we shall build on the basis of 3 million, what rates of military spending may be expected? As a beginning, pay and support have recently averaged about $3,000 a year per man; and allowing for only a moderate increase, annual payrolls alone would total $10 billion.

Beyond this first simple fact, the question becomes more complicated. How rapidly is it desired to equip these forces with new, up-to-date weapons? Should equipment be supplied merely for these forces, or stockpiled to permit putting a much larger force into the field quickly? What prices must be paid to obtain required rates of output? These and other troublesome questions have important effects on the answer, so that only the roughest of estimates is possible.

The experience of the last war, allowing for price changes and greater emphasis on air operations, would suggest that non-payroll expenditures may amount to something over $10,000 a year per man. This would require an annual rate of over $30 billion for equipment and supplies. Thus the total yearly bill for the mobilization now contemplated, including payrolls, supplies, and military assistance to the Atlantic Pact countries, would be in the neighborhood of $45 billion.

Appropriations and Expenditures

The appropriations already provided by the Congress for these purposes total roughly $32 billion. The ending of the Korean war may put some drag on the expansion of this total, but at the same time efforts to increase it will be intensified. By the end of the year all the funds now appropriated will have been committed, and there will be important items not yet provided for. At least some additional appropriations are to be expected.

Expenditures will lag substantially behind appropriations because of necessary delays in getting goods produced and delivered. President Truman has announced that an annual rate of military expenditures of $30 billion would be reached by mid-1951. Allowing for developments and difficulties that can now be foreseen, this may prove a fairly realistic estimate. Projecting such estimates still further indicates that the rate of increase in expenditures will be very high in mid-1951, sufficient, when carried forward, to produce an annual rate of expenditures of approximately $40 billion by the end of the year. What happens thereafter inevitably depends upon interim developments in the international situation, but a rate of expenditure equal to the $45 billion consistent with a 3 million man armed force may be attained early in 1952.

Such a rate of expenditure may well be reached even though next year's appropriations are not correspondingly increased, because carry-over funds and previous authorizations supplement current appropriations. At the beginning of this fiscal year, carry-overs may be assumed to total at least $10 billion. Reaching an annual rate of expenditures of $30 billion by the middle of next year implies total expenditures for fiscal 1951 of only about $21 billion, or more than another $10 billion short of appropriations. This means that more than $20 billion will be carried over into fiscal 1952. With only a moderate increase in appropriations, the projected build-up can be effected.

Financial and Economic Effects

An interesting aspect of the situation is that the sharp increases in military spending during the next two years will produce little or no problem of government finance, because the inflation of incomes and profits that is now under way will produce even larger increases in government receipts. The Federal cash budget seems likely to be balanced in fiscal 1951; and if Congress passes even a moderate excess profits tax, to which it now appears to be committed, no substantial cash deficit may be incurred even in fiscal year 1952.

But what of the economy generally? What kind of economic situation does this program imply, and what kinds of action may it be expected to call forth?

(Continued on page 9)

X-RAY APPARATUS

For a number of years Illinois has been an outstanding state in the production and development of X-ray apparatus. It was reported to be the leading state in the nation in the manufacture of X-ray and therapeutic equipment in both the 1939 and 1947 Censuses of Manufactures. In 1947, Illinois was responsible for over 40 percent of the $60 million total product value for the industry, 80 percent of which was from X-ray equipment.

The 1947 Census listed 24 Illinois establishments making X-ray and therapeutic apparatus, the majority of which were medium-sized concerns in the Chicago area manufacturing primarily medical equipment. Until recently the General Electric X-Ray Corporation, a subsidiary of General Electric and one of the largest producers of X-ray equipment in the country, was located in Illinois at Chicago and played an important part in the development and prominence of the industry in this state.

An Outstanding Medical Discovery

X-rays, which are very similar to the wave-like radiations of visible light, were discovered in 1895. A German scientist, Professor Wilhelm C. Roentgen, was charging a vacuum tube with an electric current when he noticed that a near-by paper coated with a fluorescent chemical was glowing from invisible rays given off by the tube. These rays were found to penetrate cardboard, wood, and cloth easily, and when Roentgen put his hand in front of the illuminated paper he saw the bones projected in silhouette. Concluding that flesh was transparent to the rays whereas bone structure was not, he immediately saw the possibility of taking pictures, or radiographs, using the rays to darken a photographic negative where they penetrated, revealing the hidden structures of the human body as light streaks on the film.

This discovery opened a whole new field of medical diagnosis through radiography, which leaves a permanent image on film, and through fluoroscopy, the visual study of X-ray shadows on a fluorescent screen, which shows organs in operation. Therapeutically, X-rays have been found useful in treating skin disorders, malignant growths, and certain types of acute infections. Medical use, the largest market for X-ray equipment, accounted for almost 70 percent of X-ray product value in 1947.

Industrial Radiography

Because almost all hospitals and radiologists are equipped with X-ray apparatus, they provide primarily a replacement market. Expansion in the industry is more likely to come through its second largest market, industrial radiography, which uses X-ray equipment for the inspection of castings and welds.

Ordinary industrial radiography equipment is similar to medical X-ray units. Both are built around a vacuum tube through which a current of electrons passes, striking a metal target and releasing the radiations called X-rays. The most powerful of this vacuum tube X-ray equipment, 2-million-volt units, can penetrate 12 inches of metal.

A variant of the vacuum tube type of equipment is X-ray diffraction apparatus, which has become standard equipment in industrial and academic research for the analysis and identification of materials. The technique of X-ray diffraction, as originally used for the study of single crystal stuctures, utilizes a small pencil of X-rays, generated below 50,000 volts and directed through a crystal to register the pattern indicative of its atomic or molecular arrangement on a photographic film.

The largest exclusive manufacturer of X-ray diffraction equipment in the world is the Hayes Scientific Appliances Company in Urbana, a pioneer in this field. Hayes customers include many of the largest corporations in American industry and most of the nation's universities, and a good deal of its equipment is shipped abroad.

The Betatron

The betatron is a sort of super X-ray machine with higher voltages and resultingly greater penetration than ordinary X-ray equipment. A hollow doughnut-shaped cylinder takes the place of a conventional vacuum tube. In it, the electrons are whirled around and accelerated by magnetic impulses until they attain a velocity that corresponds to whatever voltage is desired and are allowed to hit a target, releasing X-rays.

Although most people connect the betatron almost exclusively with physics research, particularly atomic energy research, it has great industrial potentiality for the detection of faults in very heavy sections of metal.

The discovery of imperfections in large industrial parts before expensive machining can result in a considerable saving, and makes the purchase of $100,000 betatrons, which can penetrate 20 or more inches of metal, a practical investment for large foundries.

In contrast to ordinary X-ray equipment which superimposes and blots out the internal parts of a machine on a radiograph, betatron negatives clearly show each part. They are therefore also valuable for studying new product designs and for showing up the causes of faulty action in large mechanical devices.

The original betatron, a 2.3-million-volt machine, was developed in 1940 by Dr. D. W. Kerst at the University of Illinois. Today the largest betatron in the world, a 340-million-volt unit, is owned by the University, which is a recognized center of betatron research.

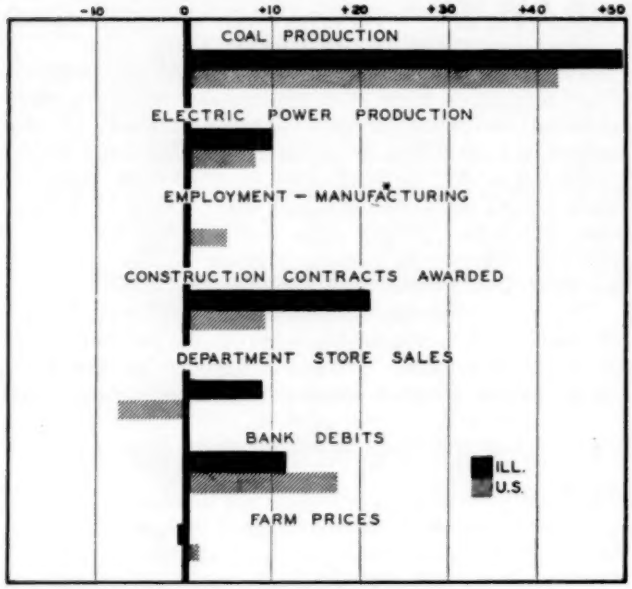
It is expected that the betatron will have extremely important medical applications. University of Illinois equipment was used for the first betatron treatment of cancer in 1949 in Urbana, and indications are that such equipment will make an outstanding contribution to the treatment of malignant growths.

Even though most of the present interest and expansion in the use of X-ray equipment is in the direction of higher voltages and greater penetration, lower voltage apparatus is far from becoming obsolete either for industrial or for medical use and should continue to be a major product of the industry.

STATISTICAL SUMMARY OF BUSINESS ACTIVITY

SELECTED INDICATORS

Percentage Changes July, 1950, to August, 1950



* Figure for Illinois not available.

ILLINOIS BUSINESS INDEXES

Items	August 1950 (1935-39 =100)	Percentage Change from July 1950	Percentage Change from August 1949
Electric power[1]	282.7	+ 9.9	+ 8.5
Coal production[2]	139.4	+49.6	+46.4
Employment—manufacturing[3]	n.a.	.....	.....
Payrolls—manufacturing[3]	n.a.	.....	.....
Dept. store sales in Chicago[4]	269.8[a]	+ 8.7	+18.3
Consumer prices in Chicago[5]	180.2	+ 0.6	+ 3.3
Construction contracts awarded[6]	665.8	+20.8	+93.7
Bank debits[7]	319.4	+11.6	+22.5
Farm prices[8]	243.2	− 0.7	+10.6
Life insurance sales (ordinary)[9]	222.7	+20.6	+41.6
Petroleum production[10]	240.3	− 0.1	− 4.2

[1] Fed. Power Comm.; [2] Ill. Dept. of Mines; [3] Ill. Dept. of Labor; [4] Fed. Res. Bank, 7th Dist.; [5] U. S. Bur. of Labor Statistics; [6] F. W. Dodge Corp.; [7] Fed. Res. Bd.; [8] Ill. Crop Repts.; [9] Life Ins. Agcy. Manag. Assn.; [10] Ill. Geol. Survey.
[a] Seasonally adjusted. n.a. Not available.

UNITED STATES MONTHLY INDEXES

Item	August 1950	Percentage Change from July 1950	Percentage Change from August 1949
	Annual rate in billion $		
Personal income[1]	223.4[a]	+ 2.0	+ 9.3
Manufacturing[1]			
Sales	291.6[a]	+12.0	+28.6
Inventories	31.6[a, b]	− 0.6	− 0.3
New construction activity[1*]			
Private residential	15.4	+ 5.0	+64.5
Private nonresidential	9.2	+ 2.6	+ 4.4
Total public	8.7	+ 4.0	+ 5.9
Foreign trade[1]			
Merchandise exports	9.1	− 1.7	−13.8
Merchandise imports	9.8	+15.5	+66.8
Excess of exports	−0.7	....	....
Consumer credit outstanding[2]			
Total credit	21.0[b]	+ 3.1	+27.5
Installment credit	13.0[b]	+ 3.2	+35.3
Business loans[2]	14.7[b]	+ 5.1	+13.7
Cash farm income[3]	32.4	+15.2	+12.0
	Indexes (1935-39 =100)		
Industrial production[2]			
Combined index	207[a]	+ 5.6	+21.8
Durable manufactures	245[a]	+ 3.8	+26.9
Nondurable manufactures	191[a]	+ 5.5	+15.8
Minerals	158[a]	+ 9.7	+22.5
Manufacturing employment[4]			
Production workers	161[a]	+ 2.7	+10.7
Factory worker earnings[4]			
Average hours worked	110	+ 1.7	+ 5.4
Average hourly earnings	245	+ 0.1	+ 4.6
Average weekly earnings	269	+ 1.8	+10.2
Construction contracts awarded[5]	655	+ 9.1	+71.0
Department store sales[2]	335[a]	− 7.5	+18.0
Consumers' price index[4]	173	+ 0.3	+ 2.5
Wholesale prices[4]			
All commodities	206	+ 2.1	+ 8.8
Farm products	234	+ 0.9	+ 9.4
Foods	221	+ 1.9	+ 8.7
Other	191	+ 2.5	+ 7.1
Farm prices[3]			
Received by farmers	250	+ 1.5	+ 9.4
Paid by farmers	206	+ 0.8	+ 3.6
Parity ratio	103[c]	0.0	+ 5.1

[1] U. S. Dept. of Commerce; [2] Federal Reserve Board; [3] U. S. Dept. of Agriculture; [4] U. S. Bureau of Labor Statistics; [5] F. W. Dodge Corp.
[a] Seasonally adjusted. [b] As of end of month. [c] Based on official indexes, 1910-14 = 100. * Data revised; not comparable with figures in previous issues.

UNITED STATES WEEKLY BUSINESS STATISTICS

Item	1950					1949
	Sept. 23	Sept. 16	Sept. 9	Sept. 2	Aug. 26	Sept. 24
Production:						
Bituminous coal (daily avg.) ..... thous. of short tons	1,902	1,879	2,013	1,837	1,830	338
Electric power by utilities ..... mil. of kw-hr.	6,457	6,449	6,029	6,459	6,346	5,556
Motor vehicles (Wards) ..... number in thous.	179.3	176.3	144.3	178.4	171.9	150.8
Petroleum (daily avg.) ..... thous. bbl.	5,826	5,870	5,839	5,690	5,629	4,875
Steel ..... 1935-39 = 100	216.9	215.2	211.7	209.8	195.7	178.0
Freight carloadings ..... thous. of cars	870	866	751	852	837	661
Department store sales ..... 1935-39 = 100	322	368	295	310	288	292
Commodity prices, wholesale:						
All commodities ..... 1926 = 100	169.8	169.1	167.7	167.2	166.0	154.0
Other than farm products and foods ... 1926 = 100	159.2	157.8	156.5	155.4	155.1	145.5
28 commodities ..... August, 1939 = 100	330.6	332.5	326.9	319.9	316.1	247.9
Finance:						
Business loans ..... mil. of dol.	15,517	15,330	14,932	14,739	14,512	13,289
Failures, commercial ..... number	155	165	145	143	176	169

Source: *Survey of Current Business, Weekly Supplements.*

RECENT ECONOMIC CHANGES

Production Continues Rise

Preliminary FRB data indicate that September industrial activity may have reached 212 percent of the 1935-39 base average, 5 points over the revised figure of 207 for August. Steel production continued at capacity levels, with average weekly output of over 1.9 million tons. Automotive output, down somewhat from August because of Labor Day and labor disputes, nevertheless averaged about 170,000 vehicles weekly; coal production was maintained at an average of more than 11 million tons weekly. Production of both durables and nondurables continues at a high level. Textile production especially has recovered from the lag in activity suffered earlier, reaching 187 percent on the FRB index during August.

Labor More Restless

The labor situation continued to be unsettled during September, as it was in August, as a result of the Korean hostilities. Prior to July, contract negotiations were long-drawn-out but remained fairly orderly, and were concerned chiefly with pensions. Since July, however, labor relations have been marked by a tendency toward many small, frequently unauthorized, stoppages and a few big strikes intended, in nearly all cases, to buttress demands for immediate and sizable wage increases. In addition, there have been numerous voluntary wage boosts, something almost unheard of in labor relations.

So many wage demands have been made and so many voluntary increases granted that Labor Secretary Tobin has asked organized labor to exercise restraint in asking for higher wages. Warning of the advance of inflation, Tobin urged that increases be held to cost-of-living rises or increases necessary to remove wage inequities.

One major dispute was settled, at least temporarily: the strike of UMW District 50 workers against various producers of soda ash ended with an agreement on a straight increase, with cost-of-living raises to come later; the pension issue, which was the primary cause of the work stoppage, remained unsettled. Pensions remain an important consideration elsewhere, also; Bendix workers won a contract similar to that at GM, as did General Electric workers after a short work stoppage.

Declines were the rule in employment and unemployment during September. The usual fall decline in the number of workers in the labor force appeared as students re-entered school, with a total of 1.3 million workers withdrawing. More than half the decrease came in nonagricultural employment, but agricultural employment also dropped and unemployment was down by 159,000 to the lowest point since December, 1948. Bureau of Census data, in thousands of workers, follow:

	September 1950	*August 1950*	*September 1949*
Civilian labor force	63,567	64,867	62,763
Employment	61,226	62,367	59,411
Agricultural	7,811	8,160	8,158
Nonagricultural	53,415	54,207	51,254
Unemployment	2,341	2,500	3,351

Manufacturers' Sales Up Substantially

Rising prices and a high level of demand combined to boost seasonally adjusted manufacturers' sales to $24.3 billion during August, 12 percent over the previous month. Durable goods showed the larger percentage rise, from $9.2 billion to $10.5 billion. Nondurables sales rose from $12.5 billion to $13.8 billion. Iron and steel, electrical machinery, motor vehicles, and lumber among durables, and textiles, apparel, chemicals, and petroleum among nondurables made the greatest gains.

New orders, totaling nearly $28 billion, rose 15 percent over July. More than half of the advance occurred in durables. Inventories were pulled down $200 million during the month; sizable declines in such nondurables as textile and petroleum stocks were important factors in the drop.

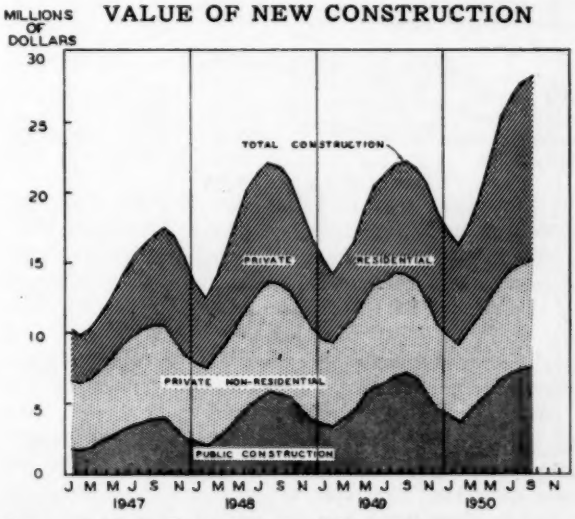
Construction Still Rising

Construction activity continued to rise during September despite restrictions imposed in July and the development of spot shortages of some materials. Total construction rose 1 percent over August to a new monthly record of $2.8 billion, more than a fourth higher than September, 1949. A sizable increase in industrial building accounted for about half the gain although private residential building also showed a small advance. During the first nine months of the year, construction activity reached a total of more than $20 billion, three-fourths of which was accounted for by private construction activity.

From early 1950 until September, private residential construction was increasingly important, as shown in the accompanying chart. It has risen considerably over the peaks of former years, whereas private nonresidential and public building continue to rise at about the same rate as in earlier postwar years. For the first eight months of the year, new housing starts totaled 988,400, more than during the whole of 1948 and more than 50 percent above the corresponding period of 1949. It appears, however, that residential building may be passing its peak, whereas industrial building may be expected to increase in response to the nation's defense needs.

Prices Less Jumpy

Following initial sharp increases after the outbreak of hostilities in Korea, price changes were less marked during September. The BLS index of 28 basic commodities had risen as much as 4 percent between August 31 and mid-September but by September 29 was down for a net advance of 1 percent. The over-all wholesale price index was also less unsettled, rising 1.3 percent to 169.4 (1926 = 100). The largest increase during the month oc-



Source: U. S. Department of Commerce.

curred in textiles, which rose more than 8 percent. Farm products and foods advanced about one-half of one percent each; prices of all other commodities were up 2.6 percent. The all-commodity index is now back to its postwar peak; farm products and foods are still below their postwar highs but all other commodities have reached a new peak.

The latest Department of Agriculture release on farm prices indicates that prices received rose from 267 to 272 (1910-14 = 100) between mid-August and mid-September. Prices paid by farmers rose only from 258 to 259; consequently the parity ratio continues to favor the farmer, moving from 103 to 105.

Between July 15 and August 15, the consumers' price index rose only 0.3 percent to 173.0 (1935-39 = 100), largely because a 0.5 percent decrease in food prices nearly offset small rises in the other groups — apparel, rent, fuel-electricity-refrigeration, housefurnishings, and miscellaneous. Seasonal declines in the prices of fresh fruits and vegetables more than counterbalanced higher prices for other foods. The postwar peak in consumers' prices, reached in August and September, 1948, was 174.5.

National Product Up

Gross national product, at annual rates, rose nearly 3 percent during the second quarter of 1950 to a new high of $270 billion. The main increase occurred in domestic investment, as construction, purchases of equipment, and accumulation of inventories all showed substantial gains in response to the recovery of business after last year's slump. Building and equipment programs were revised upward and more optimistic sales prospects encouraged buying for stocks. Personal consumption expenditures were also up. Part of the increase is attributed by the Department of Commerce to price rises, but the spending of National Service Life Insurance dividends and higher earned incomes were also factors. Buying of nondurable consumers' items showed an increase during the period after remaining about level for two quarters.

GROSS NATIONAL PRODUCT OR EXPENDITURE
(seasonally adjusted, billions of dollars at annual rates)

	2nd Qtr. 1950	1st Qtr. 1950	2nd Qtr. 1949
Gross national product	269.9	262.5	255.2
Personal consumption	184.5	182.4	178.4
Durable goods	26.7	26.9	23.0
Nondurable goods	99.0	97.5	99.2
Services	58.8	58.0	56.2
Domestic investment	45.9	40.5	31.3
New construction	20.9	19.9	16.8
Producers' durable equipment	21.6	19.3	19.8
Changes in business inventories	3.4	1.3	−5.3
Nonfarm inventories only	4.0	2.1	−4.5
Foreign investment	−2.0	−1.9	1.3
Government purchases	41.4	41.4	44.3
INCOME AND SAVINGS			
National income	n.a.	217.2	217.8
Personal income	214.7	216.4	206.8
Disposable personal income	195.5	197.7	188.2
Personal saving	11.0	15.3	9.8

Total personal income and disposable personal income were down somewhat from the first-quarter highs, but were still higher than in other previous quarters. Exclusive of veterans' insurance refunds, personal income was estimated at $213 billion, a rise of $5 billion over the previous quarters. Personal savings remained substantially higher than those for the second quarter of 1949.

Capital Expenditures Up

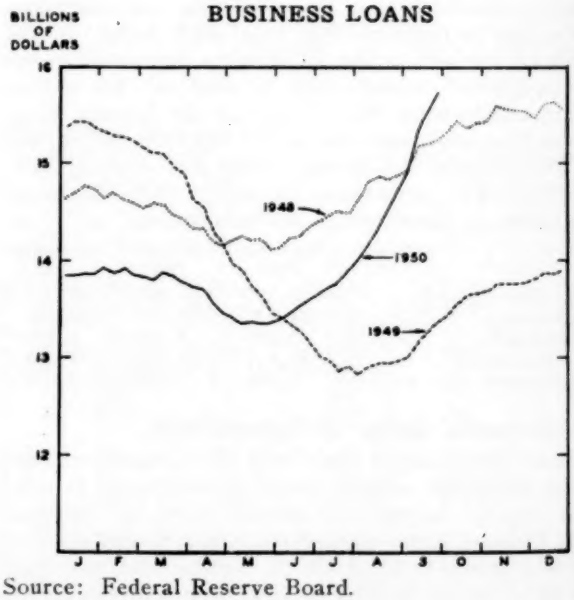
Capital investment continues to make a strong showing in response to increases in prices, sales, and profits, and the demands of national defense. Three months ago, anticipated expenditures on plant and equipment during the third quarter totaled $4.5 billion; it is now expected that such outlays will reach $5.1 billion, a 13 percent increase in which all major segments of industry shared. For the second half of the year, the total is estimated at $9.8 billion, $800 million over the comparable period of 1949. The Securities and Exchange Commission and the Department of Commerce, in their joint report, attribute about 40 percent of the gain to higher costs. Manufacturing, gas and electric utilities, and transportation other than railroads show the largest percentage gains. It appears, however, that some anticipated expenditures may not be made as scheduled, because of the unavailability of required materials and machines.

Loans Advance Rapidly

As shown in the accompanying chart, bank loans for commercial, industrial, and agricultural purposes were up sharply during September. A 7 percent boost from August 30 to September 27 raised the total of outstanding loans almost a billion dollars to $15,725 million. The previous high point was set December 22, 1948. In one week, that ending September 13th, $398 million was added. Weekly increases have occurred ever since the first of June despite the Federal Reserve Board's higher short-term interest rates imposed to minimize the inflationary factor.

Consumer credit outstanding has likewise reached a new high. At the end of August, the total had risen to $21 billion, of which more than $13 billion was accounted for by installment buying. In July and August, the monthly advances were well over $600 million, with the major portion attributable to time purchasing. It is expected that the figure for the end of September will show another sizable increase despite credit restrictions put into effect by the FRB on September 18. Since then, tighter regulations have been announced, effective October 16. Automobile credit, for example, must be repaid in 15 months instead of the 21 months originally specified, but down payments remain at one-third.

BUSINESS LOANS



Source: Federal Reserve Board.

BUSINESS BRIEFS

PUBLICATIONS AND DEVELOPMENTS OF BUSINESS INTEREST

Glass-fiber Piping

A new glass-fiber tube and pipe material has been developed as a replacement for steel and other critical war metals by the United States Plywood Corporation, New York City. The product is rust- and corrosion-proof and is said to have the strength of steel. It is essentially a lightweight laminated tubing in which glass fibers, in the form of cloth, mat, or tape, are bonded with resins into a tubing that is impervious to extreme heat, chemical action, and sledgehammer blows. The new material is being used as piping in the oil and chemical processing industries and as tubing in the building and electrical fields.

Titanium Products

Titanium and titanium alloy products are now being manufactured by Rem-Cru Titanium, Incorporated, a new firm which is jointly owned by the Remington Arms Company and the Crucible Steel Company of America. It is expected that titanium will be used, as aluminum and stainless steel are, where a light, strong, and corrosion-resistant metal is required. Rem-Cru's first commercial alloy was developed to meet the need of the aircraft industry for a formable structural sheet material with improved strength and weight properties in the intermediate temperature range. The new company, whose offices are at Bridgeport, Connecticut, is now supplying bar, sheet, plate, forgings, ingots, and billets of pure and alloyed titanium, and other forms such as strip, wire, and tubing will be made available as demand develops.

New Sulfuric Acid Process

The cost of producing sulfuric acid has been cut by as much as 20 percent of the present capital cost of a medium-sized sulfuric acid plant by a process developed by the Chemical Construction Corporation, New York City. Much simpler than the conventional contact process, it has eliminated seven major items of equipment and added a quench converter, bubble absorbers, and low-cost sulfuric acid mist eliminators. The first commercial-sized installation went into operation this summer in American Cyanamid's works at Hamilton, Ohio.

Refractory Material

The Babcock and Wilcox Company, New York City, has developed a refractory for lining high-temperature furnaces which is said to meet or surpass the specifications of present refractories but which will sell for one-half the usual price. Available in standard fire-brick sizes, the new material should enable savings not only in original cost but in furnace maintenance by reducing periodic repairs and lost production time due to shutdowns. It will not melt until it is heated to more than 3300° F. and even at that temperature it will support a 1,000-pound weight without deforming.

Diesel Fuel from Shale Oil

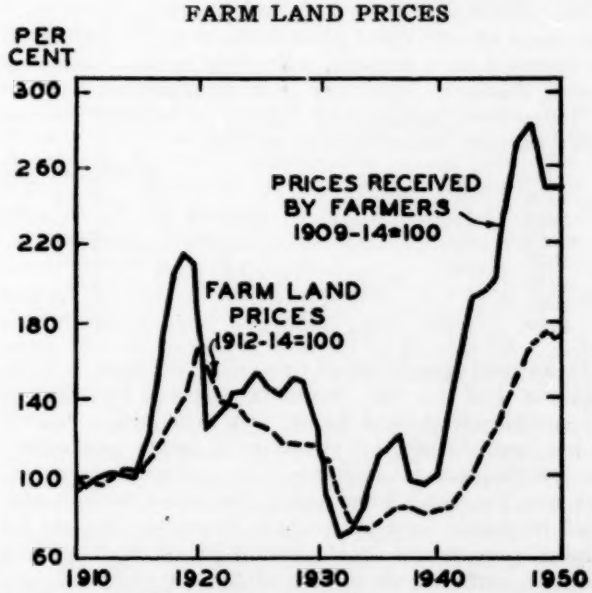
Diesel fuel refined from shale oil was used this fall for the first time to power a railroad train. The Denver and Rio Grande Western Railroad made an overnight Diesel run from Salt Lake City to Denver, using shale oil produced at an experimental mine and refining plant near Rifle, Colorado. Government officials said that 624 tons of shale yielded 3,750 gallons of Diesel fuel, an equal amount of gasoline, 6,660 gallons of heavy fuel oil, nearly 7 tons of coke, and other miscellaneous by-products. The project is regarded as one with long-term possibilities of providing additional oil reserves should petroleum resources be exhausted. Known shale deposits in Western Colorado are estimated at 100 billion barrels of oil, more than twice as much as has ever been produced in the United States from petroleum and several times the proved petroleum reserves in the ground.

Farm Land Prices Up

The September issue of *Banking*, the Journal of the American Bankers Association, contains an article entitled "Farm Land Prices Are on the Up," which points out that in March of this year the farm land price index increased for the first time since November, 1948. The index moved from 168 to 169 during the four-month reporting period beginning November, 1949, ending a decline from the all-time high of 177. By July the index of farm land prices had reached 172, an average increase of 2 percent for the country as a whole. Prices of Illinois farm land during the same period increased 1 percent.

The article attributes a good part of the upward movement to the present strong position of the livestock market and the increased demand for land suitable for raising cattle and hogs or for growing feed. It also points out that through the years there has been a definite correlation between farm land prices and the prices the farmer receives for his products. As shown by the chart, both reached an all-time low in the early 30's and an all-time high in 1948. Continued high industrial employment and the increasing purchasing power of the American people, accentuated by the Korean situation, are expected to maintain higher prices for both farm land and products.

FARM LAND PRICES



Source: *Banking*, September, 1950.

STATE-LOCAL FINANCE IN BUSINESS CYCLE POLICY

ROLF ALFRED WEIL
Associate Professor of Economics, Roosevelt College

Much attention has been concentrated in recent years on the use of Federal fiscal policy as an instrument for the stabilization of income, employment, and business conditions in general. Deficit financing by the Federal government during depressions and surplus financing during booms have commonly been accepted by economists as appropriate stabilization policies. A case could also be made that similar policies should be followed by all other units of government.

It has been recognized, however, that state and local governments could not independently engage in such a contracyclical fiscal policy. Their subsidiary units of government lack control over the money supply; they cannot significantly affect the level of income and employment within their own borders through fiscal action; and their taxing power is severely limited in that mobile firms will be influenced by effective tax rates in deciding on a business location. Moreover, constitutional and statutory tax-rate and debt limits, as well as restrictions on the types of taxes which can be employed by certain governmental units, can be cited as obstacles to independent state-local action against the cycle.

Role of Grants-in-aid

Because they realized these limitations of state-local finance, many writers in the field have tended to ignore the possibilities which exist for the intergovernmental coordination of fiscal policy. This may be unfortunate, because in the absence of such coordination Federal stabilization efforts may be partly or totally offset. This was the case during the booming twenties, when the state-local sector of the government engaged in deficit financing — thereby adding to purchasing power at the wrong time — and during the depressed thirties, when surplus financing by state and local governments reduced the effectiveness of pump-priming.

In some prosperous years like 1929, 1948, and 1949 deficits appeared in state and local finances, whereas in some years of substantial unemployment states and localities operated on a surplus. According to the *Survey of Current Business,* state and local governments showed the following surpluses and deficits in selected nonwar years (amounts in millions of dollars):

Year	*Surplus or Deficit*
1929	−118
1933	+ 38
1935	+689
1937	+861
1939	+346
1948	− 0.2
1949	− 1.3

In Federal grants-in-aid, however, we have a most promising tool for the intergovernmental coordination of a contracyclical fiscal policy. For many years Federal aid has been distributed, primarily to attain administrative coordination, to stimulate local governments to assume new functions, or to assure the better performance of old functions. Such grants have been made mainly for highway construction, performance of specified welfare functions, certain types of educational expenditures, and resource conservation activities. These grants have increased so rapidly during the past two decades that they now are an important factor in both Federal and state-local budgets. The extent of this increase is evidenced by the accompanying chart.

Federal grant payments rose from $108 million in 1929 to $1.8 billion in 1949, about 10 percent of aggregate state and local expenditures in the latter year. In Illinois, for example, Federal grants accounted for $89 million in 1949. As the table shows, the share of Illinois amounted

FEDERAL GRANTS AND ILLINOIS GRANT RECEIPTS, FISCAL 1949
(amounts in millions of dollars)

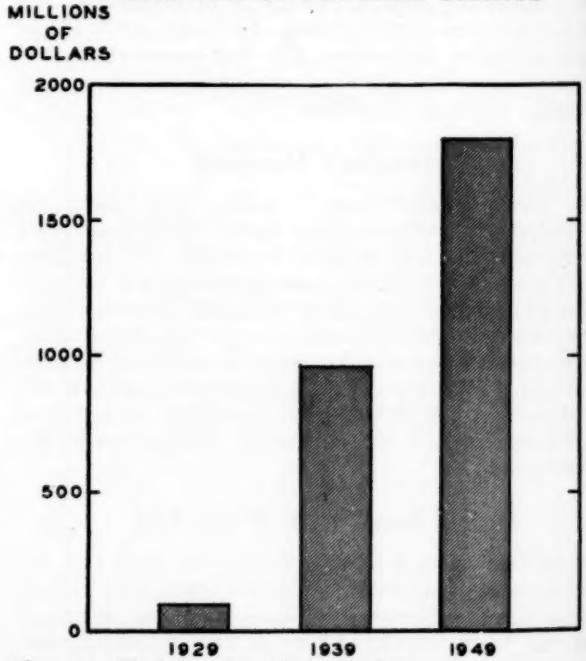
Government Activity	Federal Grants to States	Illinois Receipts from Grants
Health and welfare	$1,111	$58
Highways and Federal aid airports	435	20
Unemployment compensation and Unemployment Service Administration	137	7
Agriculture and agricultural resources	74	3
Education and research	36	1
Other	24	0.4
All activities	$1,817	$89

Source: U. S. Bureau of the Budget.

to approximately 5 percent of such payments to all the states. Moreover, the $89 million represented almost 15 percent of total Illinois state outlays in fiscal 1949.

Obviously, the magnitude of Federal grants is such that they are bound to have a significant influence on state and local finance. Nevertheless, formulas used by the Federal government for the distribution of grants

GROWTH OF FEDERAL GRANTS



Source: U. S. Bureau of the Budget.

have not been designed to aid in the stabilization of our economy over the business cycle.

Need for Fiscal Cooperation

If grants are to be an effective contracyclical weapon, they should help to change the pattern of state and local finance where this would be in the interest of stability and economic efficiency. States and localities perform some of the most important governmental functions in the United States. The need for highway construction, education, police work, and fire prevention, for example, does not change with the level of prosperity. And yet state and local governments have had to reduce expenditures for these vital activities during depressions because of decreased revenues. Inefficiency in the allocation of the nation's resources results if established local expenditure programs are cut at the same time that the Federal government is reaching out for new activities in order to prime the pump.

On the revenue side, states and localities have been forced to raise tax rates and to introduce oppressive types of taxes during periods of low economic activity in order to more nearly balance their budgets. In Illinois, for example, the sales tax was introduced in the middle of a depression.

During booms, on the other hand, there is a tendency for states and local governments to expand spending programs, thereby adding to the inflationary fuel. This characteristic pattern of state-local finance has contributed to the trend toward more centralization resulting largely from the greater fiscal strength of the Federal government. If Federal grant programs could be so altered that state-local spending and taxing would be more independent of variations in business conditions, there would unquestionably be some increase in central power but this increase would be much less than if the Federal government should continue to take over state-local functions that were inadequately performed.

Suggested Changes in Technique

In order for Federal grants to aid in the coordination of Federal-state-local contracyclical policy, a number of changes in existing grant techniques will have to be made. For example, in allocation formulas the "need" of a governmental unit for a certain aided service is often measured by factors that are rather insensitive to changes in economic activity. Population and road mileage are good examples of such factors. The fiscal need of a unit of government at a given time relative to the need during periods of high income and employment has been ignored. In order to assure local effort, dollar-for-dollar matching of Federal funds by the local unit is usually required. This obviously calls for greater effort on the part of states and localities during depressions and less effort during booms. Since grants are often given for narrowly defined special purposes, unaided functions tend to suffer particularly during bad times when the aid-receiving units are inclined to channel their limited funds to those favored activities which bring in Federal money. As a result, unfortunate distortions have occurred in state-local expenditure patterns. Unaided poor relief, for example, may be neglected in order to have funds for old age pensions, which are Federally subsidized.

In view of these and other defects, the following recommendations for grant reform seem to deserve attention. Federal grant appropriations should be varied contracyclically, and state-local matching appropriations should be increased during booms and decreased during depressions, in line with some index of the level of economic activity. Federally aided functions should be more broadly defined so that public assistance grants, for instance, would be available not only for the aged, the blind, and dependent children but for the poor in general. It might also be well for Congress to consider the introduction of some controls over the method by which state and local governments finance the matching requirements under existing grant programs. States and localities should be free in their choice of financing techniques most of the time, but in periods of marked depression or boom they should be prevented from matching funds in a deflationary or an inflationary manner, respectively.

Finally, Congress should investigate the possibilities of a contracyclically adjusted block grant which would guarantee state and local governments fairly stable total revenues even though their tax revenues were allowed to fluctuate freely. This would result in Federal grants serving not merely as expenditure stimulants but also as subsidies for state-local tax reduction at fiscally appropriate periods.

Size of the Military Program

(Continued from page 2)

The briefest answer to these questions would be that some inflation and some use of direct controls are both probable.

There is no reason to believe that the things which have to be done to effectuate the military program can be done without the use of controls over key materials and industries. Priorities have already been given to military procurement and will increasingly displace civilian production. Present lack of clearly defined policy as to allocation of non-priority supplies will create interferences and imbalances that will curtail civilian production even more than necessary. Pressures arising in these circumstances will force still further use of controls, so that there will be a movement toward complete allocations of scarce materials. Cutbacks in production of civilian goods made from such materials will inevitably be much larger than would be suggested by the size of direct military procurement.

Considered in the aggregate, the program is large enough to prevent deflation, though "shortages unemployment" will hit many communities whose industries can neither get materials nor convert to war work. On the other hand, the program is not so large as to produce unrestrained inflation; the balance of forces pushing toward higher price levels promises to remain relatively limited for several months at least. This fact, combined with fairly general agreement that over-all price and wage controls should be avoided, suggests that a moderate rate of price advance might be allowed to persist well into the coming year.

Indirect controls in the form of credit restrictions and higher taxation seem unlikely to curtail demand for a wide range of durable goods sufficiently to match the curtailments effected through military priorities. The durable goods sector of the economy thus appears to be the area in which the forces of inflation will concentrate. It represents the critical center from which selective controls will tend to spread and become general as the military program approaches its peak. VLB

LOCAL ILLINOIS DEVELOPMENTS

New highs for the year were registered in many sectors of the State's economy in August as business generally continued to expand. Electric power production, at 1.7 billion kwh., was the highest August figure on record and even exceeded the winter high of last January. Coal production reached 5.1 million tons for the first time since January, 1949.

Retail Sales

August retail sales in the State approximated $800 million, up 17 percent from August, 1949, an increase comparable with that for the nation. It now appears likely that retail sales in the State will reach $9 billion for the year, topping the 1948 high of $8.8 billion. The trend is portrayed in the accompanying chart.

A study of Illinois retail sales for the period 1940-50 shows some changes in the percentage distribution of sales among the major kinds of stores. Eating and drinking establishments, food stores, and the automotive group, respectively, gained in proportion of total sales. The food stores and the automotive group continued to gain in the first six months of 1950. (See chart.)

Defense Production

International Harvester Company is reported to be the first firm in the Chicago area to announce construction of a new plant for military requirements. It will erect a plant at its Melrose Park Works, and will employ 1,500 new workers in the production of armored vehicles.

An important development for the Chicago area was the contract given by the Air Force to Ford Motor Company to manufacture B-36 aircraft engines. The Ford Company will use the former Tucker plant. The company estimates that it will take 6 to 12 months to get the production line in operation and that 25,000-30,000 persons will be employed. The Borg-Warner Corporation plans to manufacture aircraft-engine fuel pumps at its Decatur plant.

Construction

Construction contracts awarded during August reached $111 million, topping all previous highs except the wartime peak of $143 million in September, 1942. Contracts awarded the first eight months of this year approximately doubled those in the same period last year, with residential building showing the greatest gain.

Indication of a decline in home building in the Chicago metropolitan area was reversed by an upturn in August when 4,790 new single-family and apartment units were started, an increase over July's total of 4,520. The July decline had been counter to the general boom in home building. The extent of the expansion in the area is shown by comparison with 1949 figures. In the first 8 months of this year, a total of 30,670 units were started, an increase of 83 percent over the 16,783 units started in the same period last year.

Planned investments in plant facilities in the Chicago industrial area in September were reported as $22 million. This was a 52 percent gain over the September, 1949, figure but considerably below the $62 million reported for August.

The State Highway Department recently reported bids received of approximately one-half million dollars for road improvement projects in nine Illinois counties, and the State Division of Architecture and Engineering reported bids received in September in the amount of $2.6 million for new buildings and additions at Southern Illinois University and the Manteno State Hospital.

Prices

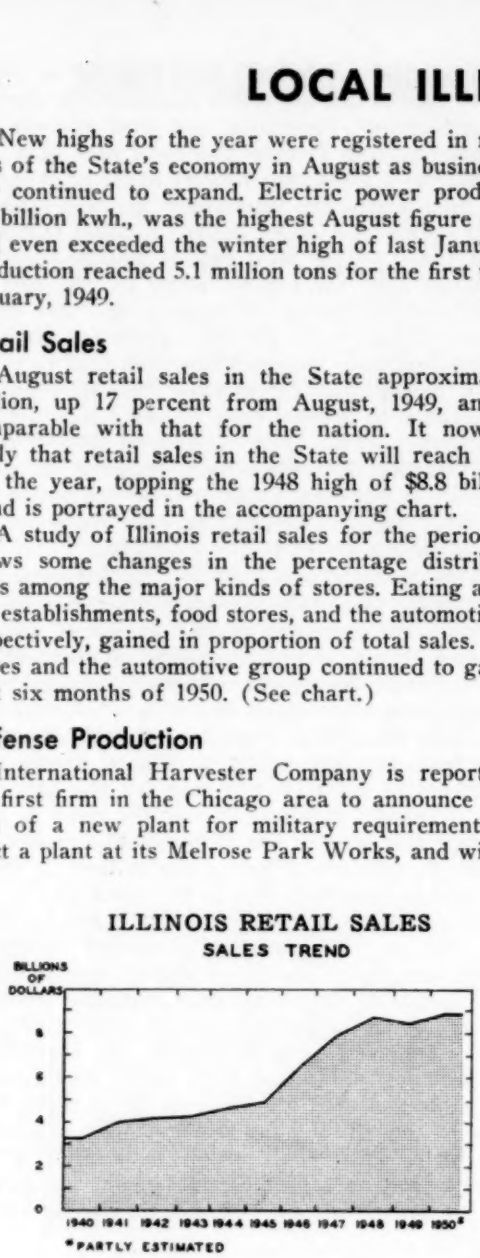
The Chicago consumers' price index moved up 0.6 percent from mid-July to mid-August to attain its highest level, 180.2 percent of the 1935-39 average. The previous high was 179.4, reported in September, 1948. Price rises were recorded in all major groups of commodities and services.

In September, Illinois farm prices rose to their highest level since October, 1948. The index of prices received by Illinois farmers was 275 in mid-September (1910-14 = 100), up one percent from August. As the U.S. index of prices paid by farmers increased only one point, the parity ratio rose from 105 in mid-August to 106 for mid-September.

Bi-State Development Agency

A resolution authorizing Illinois and Missouri to establish a bi-state agency and create a bi-state metropolitan district for the St. Louis area was recently signed by the President. The bi-state agency, which will have power to plan, build, and operate airports, bridges, tunnels, and other facilities, has already started surveys intended to solve traffic, sanitation, and other problems of the St. Louis metropolitan area.

ILLINOIS RETAIL SALES



Source: Illinois Department of Revenue.

COMPARATIVE ECONOMIC DATA FOR SELECTED ILLINOIS CITIES

August, 1950

		Building Permits[1] (000)	Electric Power Consumption[2] (000 kwh)	Estimated Retail Sales[3] (000)	Department Store Sales[4]	Bank Debits[4] (000,000)	Postal Receipts[5] (000)
ILLINOIS		$41,112[a]	778,914[a]	$467,946[a]		$9,957[a]	$10,423[a]
Percentage Change from	July, 1950	+5.8	+4.0	−4.3	+11.1	+11.6	+15.7
	Aug., 1949	+76.6	+8.2	n.a.	+18.5	+22.5	+5.9
NORTHERN ILLINOIS							
Chicago		$30,382	618,157	$338,554		$9,030	$9,138
Percentage Change from	July, 1950	+6.1	+4.0	−5.8	+13.2	+12.1	+16.4
	Aug., 1949	+74.2	+7.1	n.a.	+18.3	+22.3	+5.4
Aurora		$ 491	n.a.	$6,584		$ 39	$ 80
Percentage Change from	July, 1950	−34.4		+0.8	+1.4	+2.3	+23.6
	Aug., 1949	+33.8		n.a.	+24.7	+23.7	+20.8
Elgin		$1,263	n.a.	$4,866		$ 25	$ 74
Percentage Change from	July, 1950	+253.8		−5.1	+21.7	+4.6	+48.3
	Aug., 1949	+894.5		n.a.	+22.6	+16.9	+32.0
Joliet		$ 334	n.a.	$8,560		$ 43	$ 49
Percentage Change from	July, 1950	−21.8		−2.7	−1.6	+4.0	−20.5
	Aug., 1949	+34.1		n.a.	+19.7	+20.5	−20.2
Kankakee		$ 100	n.a.	$4,532		n.a.	$ 29
Percentage Change from	July, 1950	−22.5		−5.0	−10.6		+16.0
	Aug., 1949	−28.1		n.a.	+10.3		+8.6
Rock Island-Moline		$1,028	14,810	$8,957		$ 31[b]	$ 131
Percentage Change from	July, 1950	−30.9	+1.6	−5.5	n.a.	−2.7	+34.5
	Aug., 1949	+62.1	−3.3	n.a.		+23.0	−0.2
Rockford		$ 976	22,687	$14,021		$ 108	$ 136
Percentage Change from	July, 1950	−5.5	+13.0	−5.5	+8.5	+7.1	+9.7
	Aug., 1949	+77.5	+23.2	n.a.	+15.1	+31.5	+10.3
CENTRAL ILLINOIS							
Bloomington		$ 91	4,652	$5,213		$ 45	$ 71
Percentage Change from	July, 1950	−74.7	+5.1	+1.9	n.a.	+8.6	+13.9
	Aug., 1949	+28.2	+14.6	n.a.		+25.1	+3.2
Champaign-Urbana		$ 779	6,211	$6,822		$ 47	$ 60
Percentage Change from	July, 1950	−22.1	−4.1	−3.4	n.a.	+10.4	+19.2
	Aug., 1949	−34.9	+13.9	n.a.		+36.5	+5.1
Danville		$ 264	7,278	$5,686		$ 38	$ 47
Percentage Change from	July, 1950	−14.8	+14.0	+5.9	+6.6	+0.6	+6.7
	Aug., 1949	+261.6	+15.7	n.a.	+25.6	+21.7	+1.0
Decatur		$1,737	16,875	$8,981		$ 80	$ 75
Percentage Change from	July, 1950	+64.6	+18.7	+2.5	−3.9	+14.9	+6.9
	Aug., 1949	+451.4	+29.6	n.a.	+13.9	+15.4	+16.0
Galesburg		$ 391	4,818	$3,878		n.a.	$ 25
Percentage Change from	July, 1950	+167.8	+5.5	−1.7	n.a.		−6.0
	Aug., 1949	+104.7	+12.5	n.a.			+4.1
Peoria		$1,862	38,500[c]	$16,577		$ 207	$ 165
Percentage Change from	July, 1950	+161.2	−7.5	+1.7	+7.8	+10.2	+2.4
	Aug., 1949	+169.1	+15.8	n.a.	+19.7	+39.5	+21.1
Quincy		$ 193	n.a.	$4,788		$ 32	$ 72
Percentage Change from	July, 1950	−37.5		+0.3	+11.0	+6.3	+32.7
	Aug., 1949	−17.9		n.a.	+20.0	+19.7	+18.3
Springfield		$ 318	20,250[c]	$12,980		$ 79	$ 171
Percentage Change from	July, 1950	−55.5	+6.1	+8.4	−13.3	+3.2	+4.3
	Aug., 1949	−9.1	+7.8	n.a.	+21.6	+21.7	+9.7
SOUTHERN ILLINOIS							
East St. Louis		$ 298	9,569	$8,555		$ 127	$ 46
Percentage Change from	July, 1950	−71.9	+1.0	+4.9	n.a.	+9.9	−18.4
	Aug., 1949	−29.2	−2.4	n.a.		+12.3	+15.5
Alton		$ 394	10,791	$4,431		$ 26	$ 21
Percentage Change from	July, 1950	+154.2	+13.0	+1.3	n.a.	+3.5	−7.6
	Aug., 1949	+171.7	+11.4	n.a.		+15.4	−5.0
Belleville		$ 211	4,318	$3,962		n.a.	$ 33
Percentage Change from	July, 1950	−4.1	−1.2	+4.8	n.a.		+10.5
	Aug., 1949	+157.3	+6.6	n.a.			+29.8

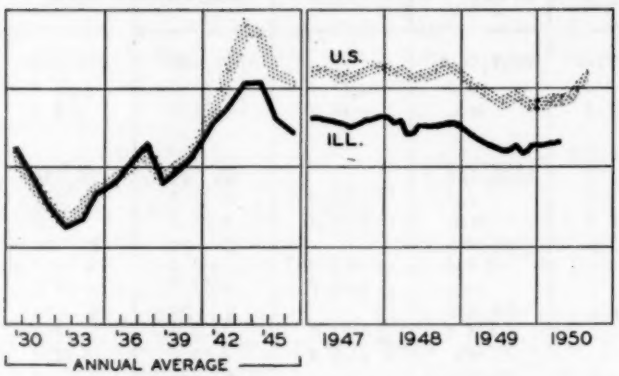
Sources: [1]U. S. Bureau of Labor Statistics. Data include Federal construction projects. [2]Local power companies. [3]Illinois Department of Revenue. Data are for July, 1950, the most recent available. Comparisons relate to June, 1950. [4]Research Departments of Federal Reserve Banks in Seventh (Chicago) and Eighth (St. Louis) Districts. [5]Local post office reports.

[a] Total for cities listed.
[b] Moline only.
[c] Includes immediately surrounding territory.
n.a. Not available.

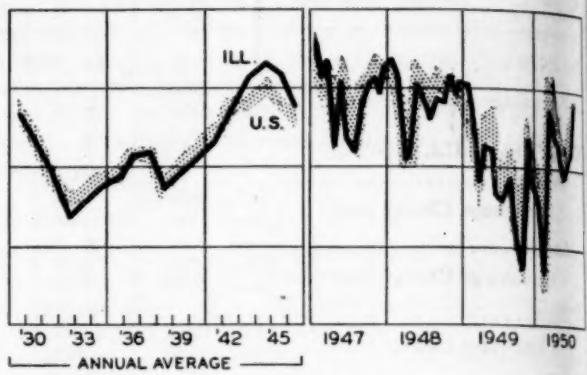
INDEXES OF BUSINESS ACTIVITY

1935-1939 = 100

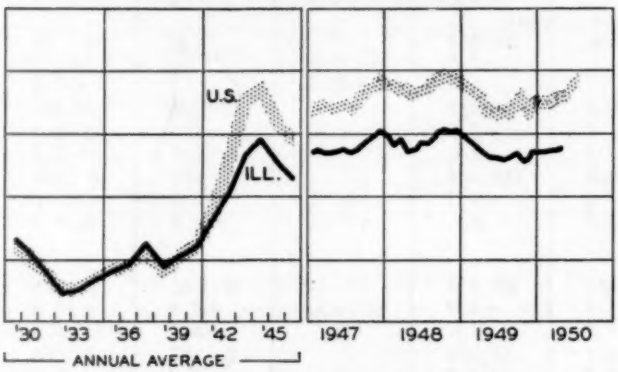
EMPLOYMENT–MANUFACTURING



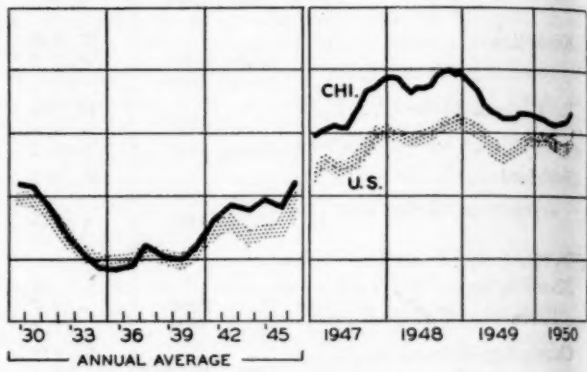
COAL PRODUCTION



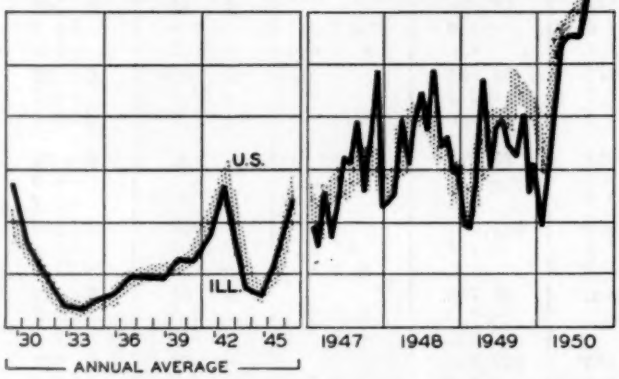
PAYROLLS–MANUFACTURING



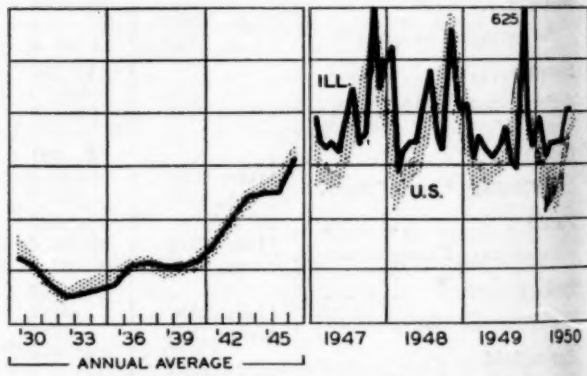
BUSINESS LOANS



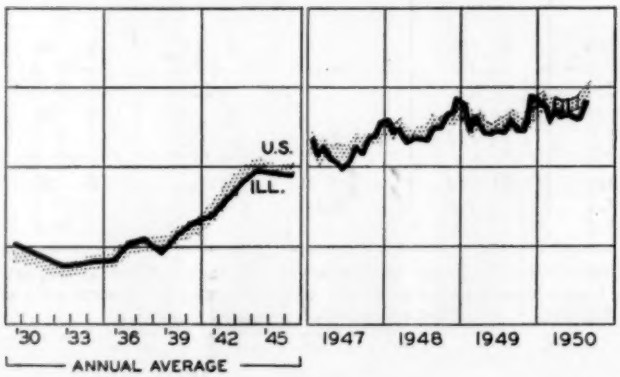
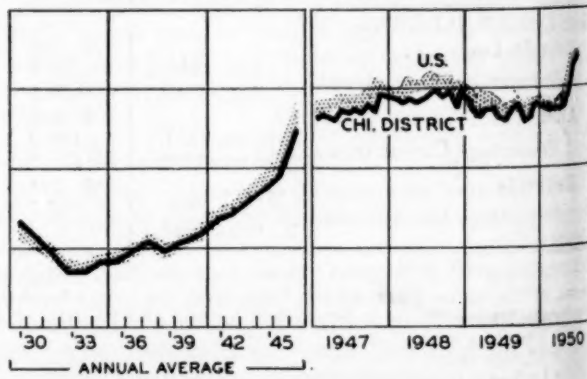
CONSTRUCTION CONTRACTS AWARDED



CASH FARM INCOME



ELECTRIC POWER PRODUCTION



DEPARTMENT STORE SALES